

DETAILED ACTION

Drawings

1. The drawings are objected to because the rectangular boxes (101, 103, and 105) and the circles (100, 102, 104) in figures 1a-1c should be labeled (see MPEP 608.02(d)). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1 and 2** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. PG Publication 2003/0016630 A1 to *Vega-Garcia et al.* ("Vega-Garcia").

4. As to **claim 1**, Vega-Garcia discloses a communication network (207), comprising:

a real clock that determines a pre-determined RTP packet transmission rate for a streaming application, R.sub.0(t), based on encoded content (fig 4. element 218 shows an RTP packet with a time stamp, page 3, paragraph 30 specifies the timestamp as the transmittal time of the packet determined at origination, a real clock must be present in order to create a time stamps);

a real clock having a frequency f(t) that determines a dynamic transmission rate for the streaming application (page 3, paragraph 37 since the quality control mechanism has the functionality of being able to compute a network bandwidth and dynamically selecting an optimal bandwidth and frame rate, it must have a clock);

a streaming server (206) that transmits a plurality of RTP packets at the determined dynamic transmission rate for the streaming application (column 3,

paragraph 37 where the quality control mechanism is interpreted as a streaming server which is a computer executable module that can be implemented as hardware);

and a network component (203) that calculates available bandwidth $R_{sub.L}(t)$ for the streaming application, wherein $f(t)$ is dynamically adjusted based on $R_{sub.L}(t)$ and $R_{sub.0}(t)$ (page 3, paragraph 37, describes a quality control mechanism as a computer executable module which has the function of computing available bandwidth of the network and dynamically selecting the optimal bandwidth and frame rate for outgoing streams).

5. As to **claim 2**, Vega-Garcia discloses a communication network (207) of claim 1, wherein the streaming server (206) is a multimedia streaming server (page 2, paragraph 20 describes a server that is capable of transmitting streaming media which refers to video, audio, and multimedia data).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 3- 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. PG Publication 2003/0016630 to *Vega-Garcia et al.* ("Vega-Garcia") in view of Applicants' Admitted Prior Art.

As to claim 3, Vega-Garcia discloses a communication network as to the parent claim.

Vega-Garcia does not disclose how to configure the frequency of a real clock.

Applicants' Admitted Prior Art discloses that the formula that prescribes how to configure the frequency of the virtual clock is a general principle as stated on page2, paragraph 16 of the application.

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to have known this general principle.

8. As to **claim 4**, Vega-Garcia discloses the communication network (207) of claim 3, wherein R.sub.L(t) is measured by one of a network interface driver at the streaming server (206), a set of one or more dedicated network components (203) residing in the network (207), and a set of one or more dedicated components at a receiver (page 4, paragraph 36-37 the prior art teaches the quality control mechanism is performed by one or multiple devices exchanging streaming data. Therefore the functionality of calculating the bandwidth is interpreted as being performed within the receiving device).

9. As to **claim 5**, Vega- Garcia discloses the communication network (207) of claim 4, wherein the network (207) is a wireless network (page 2, paragraph 23 teaches the communication network covers both wired and wireless networks)

and the set of one or more dedicated components at the receiver is a monitor placed into the wireless network driver such that the driver measures $R_{sub.L}(t)$ (202) and sends the measured $R_{sub.L}(t)$ (202) to the streaming server (206) (page 4, paragraph 34 where a receiving device communicates network bandwidth information to the sending device (server) and page 4, paragraph 36-37 the prior art teaches the quality control mechanism is performed by one or multiple devices exchanging streaming data. Therefore the functionality of calculating the bandwidth is interpreted as being performed within the receiving device)).

As to **claims 6, 11, and 17**, see similar rejection to claim 1.

As to **claims 7 and 12**, see similar rejection to claim 2.

As to **claims 8, 13, and 18**, see similar rejection to claim 3.

As to **claims 9, 14, and 19**, see similar rejection to claim 4.

As to **claims 10, 15, and 20**, see similar rejection to claim 5.

As to **claim 16**, an operating system kernel function at an application layer of a protocol that implements the real clock of claim 13, wherein, the function interacts with a lower layer of the protocol to return the virtual frequency $f(t)$.

Vega-Garcia discloses where the RTP module runs on top of the User Datagram Protocol, which is a lower layer of the protocol, in order to utilize its multiplexing and execute its end-to-end services. The function of transmitting streaming media at various bandwidths would also be included.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL MITCHELL whose telephone number is (571)270-5307. The examiner can normally be reached on Monday - Friday 8:00 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lao Lun-yi can be reached on 571-272-7671. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. M./
Examiner, Art Unit 4134

/LUN-YI LAO/
Supervisory Patent Examiner, Art Unit 4134

